



**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI
SPECIAL TROPICAL WEATHER OUTLOOK**

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 16.10.2024

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND THE ARABIAN SEA) VALID FOR NEXT 168 HOURS ISSUED AT 0330 UTC OF 16.10.2024 BASED ON 0000 UTC OF 16.10.2024.

BAY OF BENGAL:

SUB: DEPRESSION OVER SOUTHWEST BAY OF BENGAL

THE DEPRESSION OVER SOUTHWEST BAY OF BENGAL MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 12 KMPH DURING PAST 6 HOURS AND LAY CENTERED AT 0000 UTC OF TODAY, THE 16TH OCTOBER 2024 OVER THE SAME REGION NEAR LATITUDE 12.1° N AND LONGITUDE 83.4° E, ABOUT 360 KM EAST-SOUTHEAST OF CHENNAI (43279), 390 KM EAST OF PUDUCHERRY (43331) AND 450 KM SOUTHEAST OF NELLORE (43245).

IT IS LIKELY TO MOVE WEST-NORTHWESTWARDS AND CROSS NORTH TAMIL NADU - SOUTH ANDHRA PRADESH COASTS BETWEEN PUDUCHERRY AND NELLORE, CLOSE TO CHENNAI AROUND 0000 UTC OF 17TH OCTOBER.

AT 0000 UTC, INTENSITY OF THE SYSTEM IS CHARACTERISED AS T 1.5. ASSOCIATED SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER WESTCENTRAL AND SOUTH BAY OF BENGAL (MINIMUM CLOUD TOP TEMPERATURE IS MINUS 80-93°C).

THE ASSOCIATED ESTIMATED CENTRAL PRESSURE IS 1002 HPA AND MAXIMUM SUSTAINED WIND SPEED WITH THE SYSTEM IS 25 KTS GUSTING TO 35 KTS.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME (UTC)	POSITION (LAT. °N/ LONG. °E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
16.10.24/0000	12.1/83.4	40-50 GUSTING TO 60	DEPRESSION
16.10.24/1200	12.8/82.0	40-50 GUSTING TO 60	DEPRESSION
17.09.24/0000	13.2/80.5	40-50 GUSTING TO 60	DEPRESSION
17.09.24/1200	13.6/79.0	25-35 GUSTING TO 45	WELL MARKED LOW PRESSURE AREA

WARNINGS:

(I) RAINFALL WARNING:

TAMIL NADU & PUDUCHERRY: LIGHT TO MODERATE RAINFALL OVER MOST PLACES WITH HEAVY TO VERY HEAVY RAINFALL AT A FEW PLACES WITH EXTREMELY HEAVY RAINFALL AT ISOLATED PLACES IS VERY LIKELY OVER NORTH TAMIL NADU & PUDUCHERRY ON 16TH OCTOBER AND ISOLATED HEAVY TO VERY HEAVY RAINFALL OVER NORTH INTERIOR TAMIL NADU ON 17TH OCTOBER.

LIGHT TO MODERATE RAINFALL OVER MOST PLACES WITH HEAVY RAINFALL AT ISOLATED PLACES IS VERY LIKELY OVER SOUTH TAMIL NADU DURING 16TH TO 17TH OCTOBER.

SOUTH ANDHRA PRADESH & RAYALASEEMA: LIGHT TO MODERATE RAINFALL OVER MOST PLACES WITH HEAVY TO VERY HEAVY RAINFALL AT A FEW PLACES WITH EXTREMELY HEAVY RAINFALL AT ISOLATED PLACES IS LIKELY ON 16TH OCTOBER AND HEAVY RAINFALL AT ISOLATED PLACES IS LIKELY ON 17TH OCTOBER.

KERALA & SOUTH INTERIOR KARNATAKA: LIGHT TO MODERATE RAINFALL OVER MOST PLACES WITH HEAVY TO VERY HEAVY RAINFALL AT ISOLATED PLACES IS LIKELY OVER KERALA AND SOUTH INTERIOR KARNATAKA DURING 16TH TO 17TH OCTOBER.

(II) WIND WARNING:

SQUALLY WIND SPEED REACHING 40-50 KMPH GUSTING 60 KMPH IS LIKELY TO PREVAIL OVER SOUTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL AND ALONG & OFF TAMIL NADU, PUDUCHERRY AND SOUTH ANDHRA PRADESH COASTS TILL 0600 UTC OF 17TH OCTOBER AND DECREASE GRADUALLY THEREAFTER.

(III) SEA CONDITION:

ROUGH TO VERY ROUGH SEA CONDITION IS LIKELY TO PREVAIL OVER SOUTHWEST & ADJOINING WESTCENTRAL BAY OF BENGAL AND ALONG & OFF TAMIL NADU, PUDUCHERRY AND SOUTH ANDHRA PRADESH COASTS TILL 0600 UTC OF 17TH OCTOBER AND IMPROVE GRADUALLY THEREAFTER.

(IV) FISHERMEN WARNING:

FISHERMEN ARE ADVISED NOT TO VENTURE INTO

- SOUTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL TILL 17TH OCTOBER.
- FISHERMEN OUT AT SEA ARE ADVISED TO RETURN TO COASTS.

REMARKS:

OVER THE BAY OF BENGAL, CICS BASED FORECAST INDICATES STRONG WESTERLY WINDS (5-7 MPS) OVER SOUTH BOB AND ADJOINING EQUATORIAL INDIAN OCEAN AND STRONG EASTERLY WINDS (5-7 MPS) OVER WESTCENTRAL BAY OF BENGAL. MJO& KELVIN WAVES ALONGWITH ROSSBY WAVES ARE ALSO LIKELY OVER THE BAY OF BENGAL DURING NEXT 8-10 DAYS. THESE FEATURES INDICATE HIGHLY FAVOURABLE ENVIRONMENT FOR CYCLOGENESIS (FORMATION OF DEPRESSION) OVER THE BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 28-32°C OVER ENTIRE BOB. THE TROPICAL CYCLONE HEAT POTENTIAL (TCHP) OVER >100 KJ/CM² OVER WESTCENTRAL & ADJOINING SOUTHWEST BOB AND SOUTH ANDAMAN SEA, 80-100 KJ/CM² OVER SOUTHEAST BOB. A ZONE OF POSITIVE CYCLONIC VORTICITY OF 50-100 X 10⁻⁵ S⁻¹ IS SEEN OVER SOUTHWEST BOB. POSITIVE LOW-LEVEL CONVERGENCE 20X10⁻⁶ S⁻¹ IS SEEN OVER SOUTHWEST BOB. POSITIVE UPPER-LEVEL DIVERGENCE IS AROUND 20-30X10⁻⁶ S⁻¹ OVER SOUTHWEST BOB & ADJOINING EASTCENTRAL ARABIAN. VERTICAL WIND SHEAR (VWS) IS LOW (5-10 KNOTS) OVER CENTRAL AND ADJOINING AREAS OF SOUTH BAY OF BENGAL (AROUND THE SYSTEM AREA). UPPER TROPOSPHERIC RIDGE RUNS ALONG 20°N. THE EAST-SOUTHEASTERLY WINDS PREVAILING OVER SOUTH BAY OF BENGAL ARE INDICATING WEST-NORTHWESTWARDS MOVEMENT OF SYSTEM. MULTI-SATELLITE WINDS INDICATE STRONGER WINDS IN THE NORTHERN AND SOUTHWEST SECTOR. CURRENT ENVIRONMENTAL FEATURES ARE SUPPORTIVE FOR CYCLOGENESIS (FORMATION OF DEPRESSION) OVER SOUTHWEST BAY OF BENGAL.

IMD GFS INDICATES A DEPRESSION OVER SOUTH BOB AT 16/00. THE FORECAST IS SHOWING THE SYSTEM WILL REACH CHENNAI COAST ON 17/00 UTC. IT IS FURTHER INDICATING EMERGENCE OF SYSTEM INTO EASTCENTRAL AS ON 19TH OCT AND INDICATING THE SYSTEM TO MOVE WEST-NORTHWESTWARDS WITHOUT ANY SIGNIFICANT INTENSIFICATION TILL 22ND OCTOBER. NCUM GROUP OF MODELS ARE NOT INDICATING ANY SIGNIFICANT INTENSIFICATION OF SYSTEM. HOWEVER, THIS GROUP IS ALSO INDICATING MOVEMENT TOWARDS NORTH TAMIL NADU COAST AND EMERGENCE OF THE CYCLONIC CIRCULATION/LOW PRESSURE AREA INTO EASTCENTRAL AS ON 18TH OCTOBER.

ECMWF IS ALSO INDICATING A DEPRESSION ON 16TH 0000 UTC AND INDICATING WEAKENING INTO A WELL MARKED LOW PRESSURE AREA/DEPRESSION ON 16TH OCTOBER. THE MODEL IS INDICATING THE WELL MARKED LOW PRESSURE TO MOVE WEST-NORTHWESTWARDS AND TO CROSS NORTH TAMILNADU-SOUTH ANDHRA PRADESH COAST NEAR 13.1/80.4 ON 17/09 UTC AS A WELL MARKED LOW PRESSURE AREA. IT IS ALSO INDICATING EMERGENCE INTO EASTCENTRAL ARABIAN SEA AROUND 19TH OCTOBER AND THEN WEST-NORTHWESTWARDS MOVEMENT TOWARDS OMAN COAST WITHOUT SIGNIFICANT INTENSIFICATION. IMD MULTI MODEL ENSEMBLE IS INDICATING NEARLY NORTHWESTWARDS MOVEMENT OF THE SYSTEM TOWARDS CHENNAI AND CROSSING AROUND 17/14 UTC NEAR 12.7/80.2.

CONSIDERING VARIOUS ENVIRONMENTAL FEATURES AND MODEL GUIDANCE, IT IS INFERRED THAT;

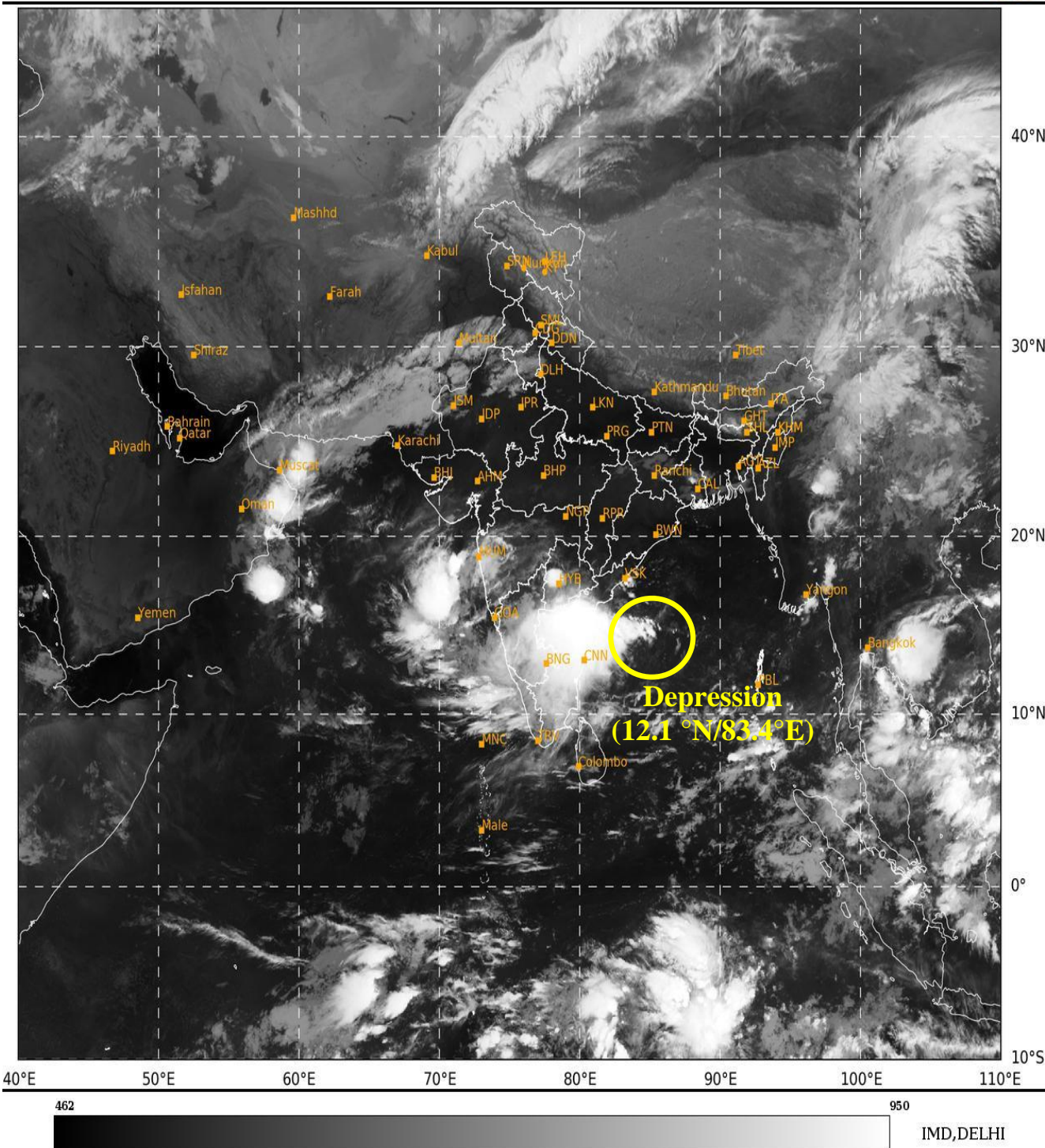
(i) THE DEPRESSION OVER SOUTHWEST BAY OF BENGAL MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 12 KMPH DURING PAST 6 HOURS.

IT IS LIKELY TO MOVE WEST-NORTHWESTWARDS AND CROSS NORTH TAMIL NADU - SOUTH ANDHRA PRADESH COASTS BETWEEN PUDUCHERRY AND NELLORE, CLOSE TO CHENNAI AROUND 0000 UTC OF 17TH OCTOBER.

THE NEXT BULLETIN WILL BE ISSUED AT 0600 UTC BASED ON 0300 UTC OF 16TH OCTOBER, 2024.

(TRISANU BANIK)

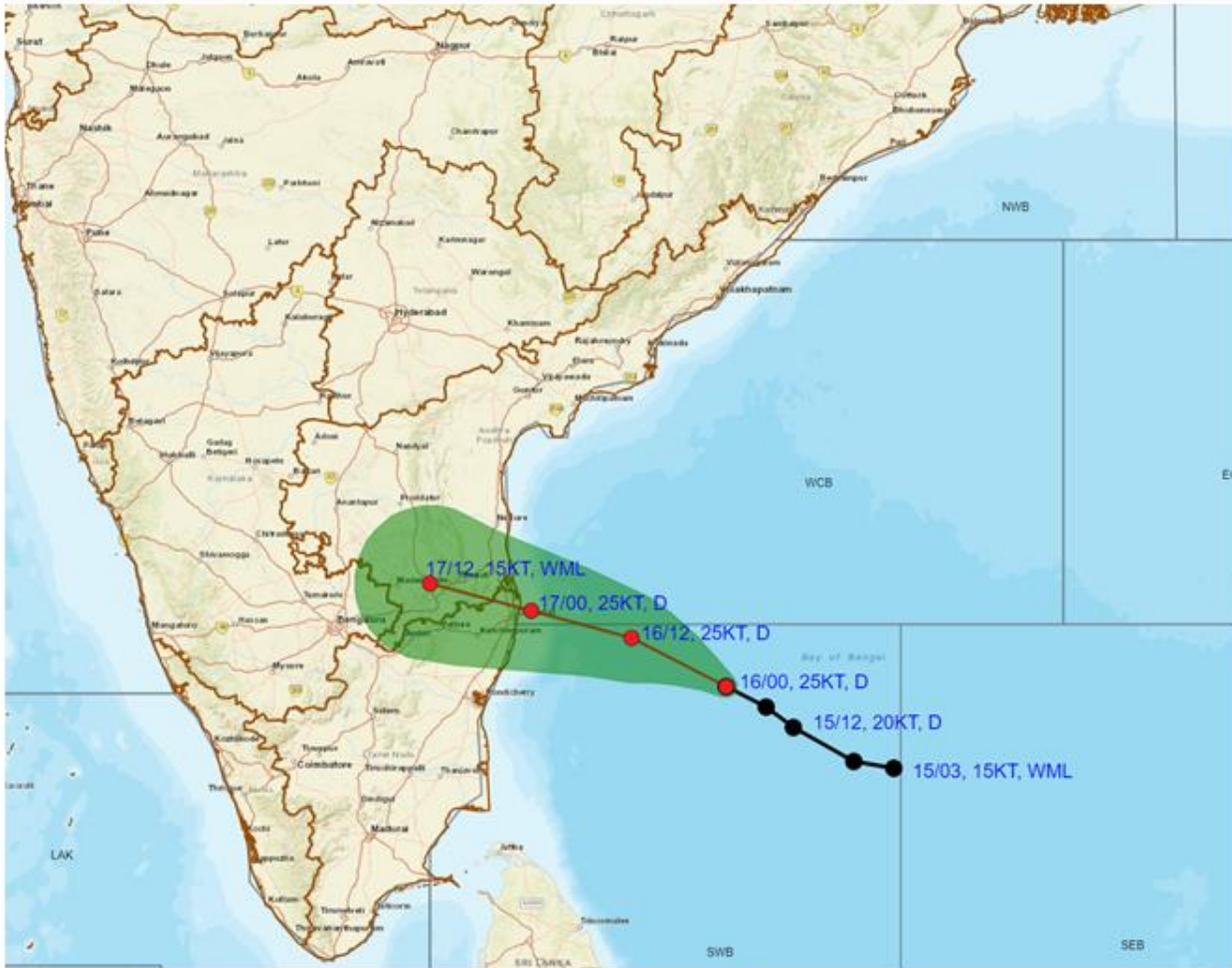
SC. D, RSMC, NEW DELHI



Cloud distribution: (a) Isolated: <25%, Scattered:25-50%, Broken: 51-75%, Solid:>75%, Convection Intensity: (a) Weak: Cloud Top Temperature (CTT) >-25°C, (b) Moderate: CTT: - 25°C to -40°C, (c) Intense: CTT: - 41°C to -70°C and (d) Very Intense: : Less than -70°C
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION):NIL: 0%, LOW: 1-33%, , MODERATE: 34-66% AND HIGH: 67-100%
This is a guidance Bulletin for WMO/ESCAP Panel Member countries. Visit respective National websites for Country specific Bulletins



OBSERVED AND FORECAST TRACK WITH CONE OF UNCERTAINTY (COU) OF DEPRESSION OVER SOUTHWEST BAY OF BENGAL BASED ON 0000 UTC (0530 Hrs. IST) OF 16th OCTOBER, 2024

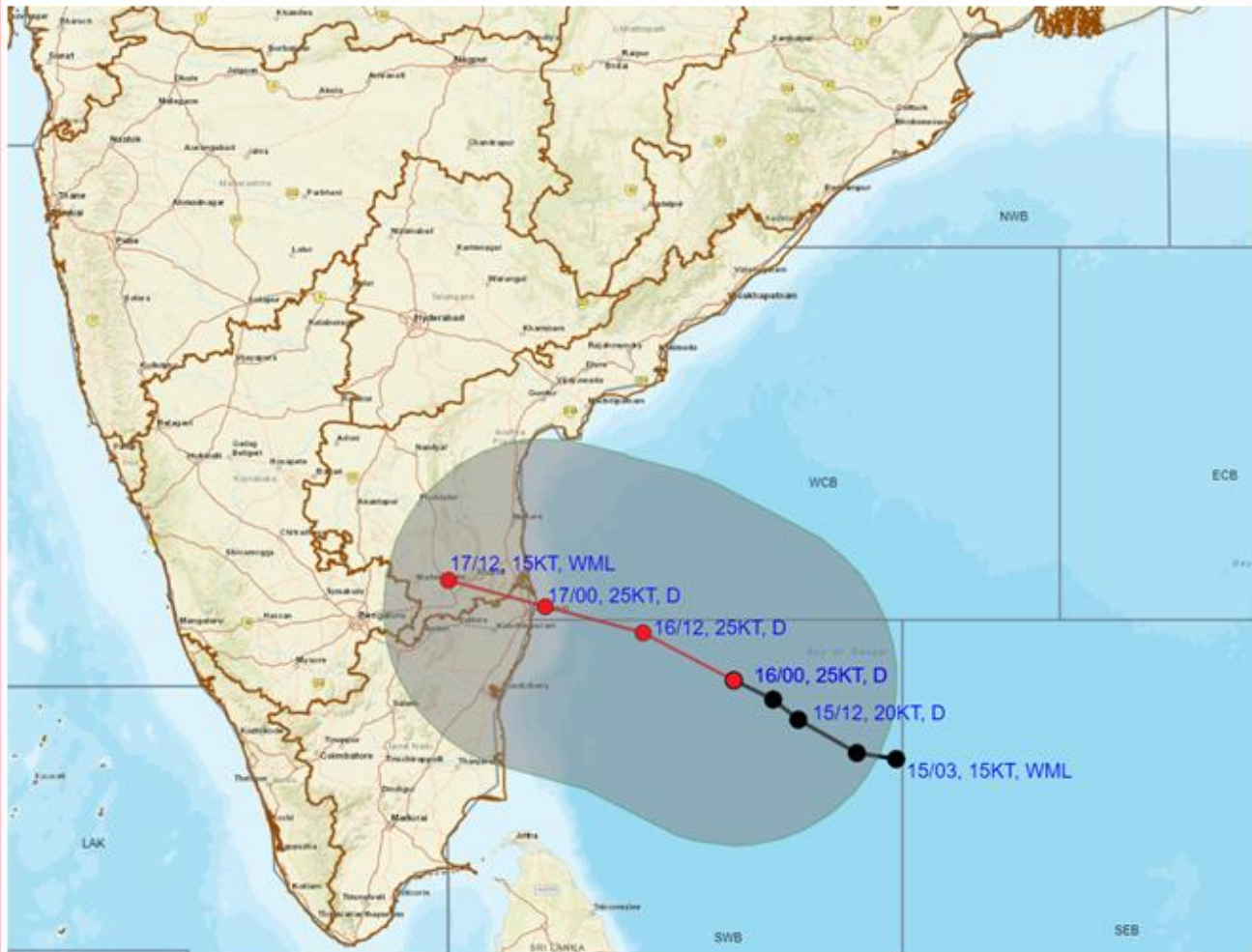


DATE/TIME IN UTC
 IST=UTC + 0530
 L: LOW PRESSURE AREA
 WML: WELL MARKED LOW PRESSURE AREA
 D: DEPRESSION (17-27 KT)
 DD: DEEP DEPRESSION (28-33 KT)
 CS: CYCLONIC STORM (34-47 KT)
 SCS: SEVERE CYCLONIC STORM (48-63KT)
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
 ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)
 SuCS: SUPER CYCLONIC STORM (\geq 120 KT)

- LESS THAN 34 KT
- 34-47 KT
- \geq 48 KT
- OBSERVED TRACK
- FORECAST TRACK
- CONE OF UNCERTAINTY



OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF DEPRESSION OVER SOUTHWEST BAY OF BENGAL BASED ON 0000 UTC (0530 Hrs. IST) OF 16th OCTOBER, 2024

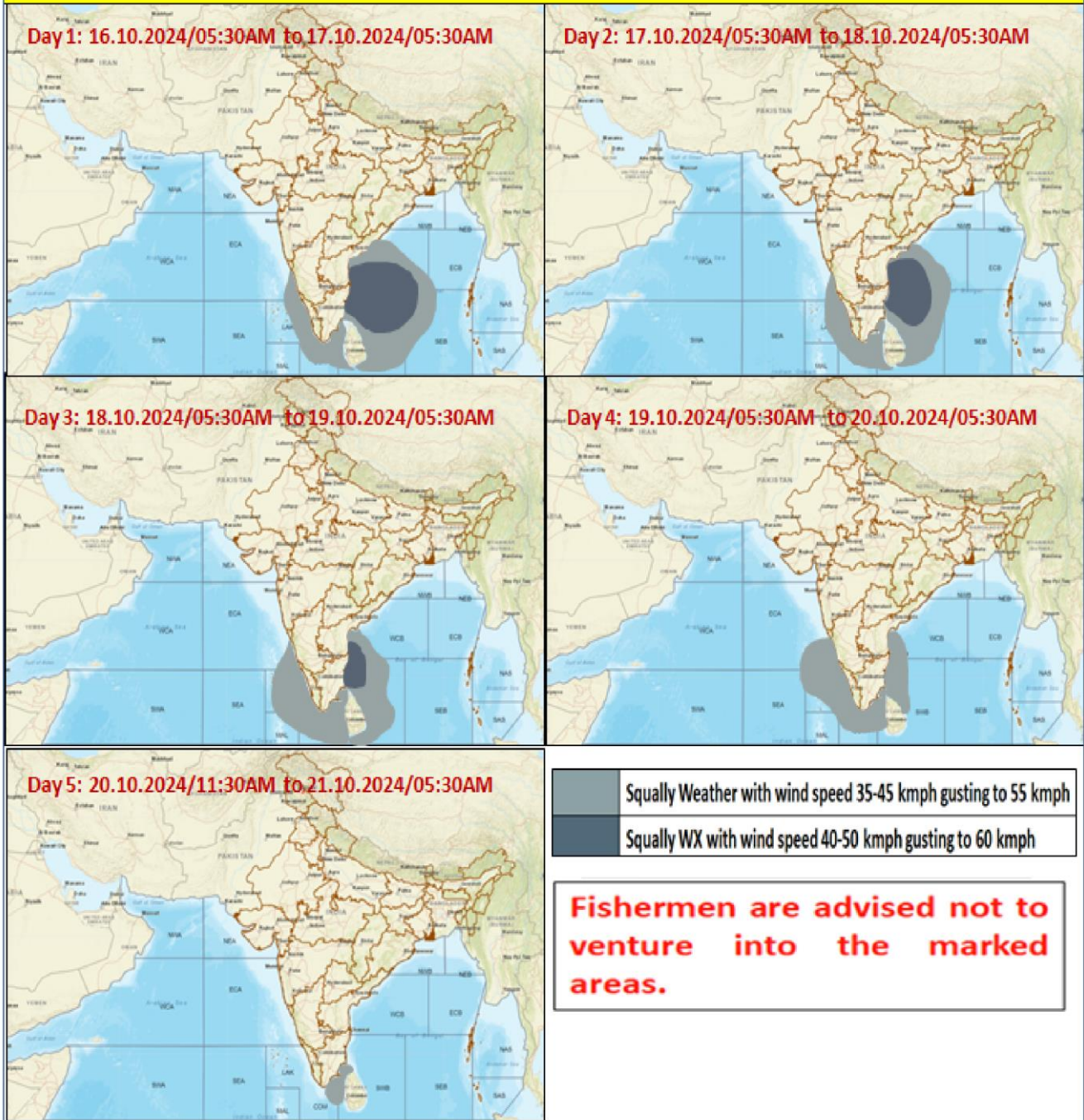


DATE/TIME IN UTC
 IST=UTC + 0530
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 DD: DEEP DEPRESSION (28-33 KT)
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● LESS THAN 34 KT
 ○ 34-47 KT
 ● ≥ 48 KT
 — OBSERVED TRACK
 — FORECAST TRACK
 — CONE OF UNCERTAINTY
 AREA OF MAXIMUM SUSTAINED WIND SPEED:
 ■ 20-30 KT (35-55 KMPH)

Cloud distribution: (a) Isolated: <25%, Scattered:25-50%, Broken: 51-75%, Solid:>75%, Convection Intensity: (a) Weak: Cloud Top Temperature (CTT) >-25°C, (b) Moderate: CTT: - 25°C to -40°C, (c) Intense: CTT: - 41°C to -70°C and (d) Very Intense: : Less than -70°C
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Fishermen Warning Graphics



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